

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

REPORT FOR:

MONTH

June

YEAR

1997

SIGNATURE

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In Charge of HSA

DATE

July 8, 1997

TO: Hydrometeorological Information Center, W/OH2
 NOAA / National Weather Service
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When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (WSOM E-41).

June was an extremely wet month over most of the San Angelo Hydrologic Service Area with three major flood events. A total of 77 flash flood and flood warnings were issued for 22 of the 23 counties in the HSA during the month of June. Several river flood warnings were also issued for the Colorado, San Saba, and Llano rivers. One death was attributed to the flooding on June 22nd.

The first major flood event occurred over the Big Country near Sweetwater and over Heartland near San Saba on June 6th. A total of 19 flash flood warnings were issued during this event, with San Saba County under continuous warnings for 12 hours.

An outflow boundary was produced by storms just south of the HSA on the afternoon of June 5th. A mesoscale convective system over the Texas panhandle during the night of June 4th produced a mesoscale vorticity center which moved into the Big Country during the early morning hours on the 6th. This feature combined with the northward-moving outflow boundary to produce numerous showers and thunderstorms, which developed into a mesoscale convective system. Weak winds aloft and deep tropical moisture increased the flash flood threat of these storms.

The flooding began in Mitchell, Nolan and western Taylor counties during the early morning hours. Numerous roads were closed in and around Sweetwater with one foot of water reported over a bridge along Town Creek. Runoff from the rainfall over Nolan and Western Taylor counties caused Elm Creek to rise and Lake Abilene to fill. Roads were closed in Taylor County near Buffalo Gap along Highway 89. The heavy rain continued to move southeastward during the morning across Coleman into San Saba County, where it stayed for several hours. County roads and streets around Coleman were flooded, with a few cars stalled. The heaviest rain fell over Northern San Saba County near Elm Grove. Doppler radar estimated over 11 inches of rain in this area. This water drained into the Colorado River and caused an 8 foot rise near San Saba on the 7th. The San Saba River at San Saba rose 9 feet. Rainfall reports from this event included 10 inches in Elm Grove, 8 inches in Richland Springs, 4.2 inches at O.H. Ivie Reservoir, 3 inches in Coleman, and 3.5 inches just south of Sweetwater. The significance of this flood event was that it set the stage for later major flooding over the Big Country near Abilene and along the Colorado River by increasing soil moisture and filling Lake Abilene.

The second major flood event occurred on June 8th and 9th across the Upper Colorado and Brazos River basins mainly over Mitchell, Taylor and Nolan counties. Elm Creek south of Abilene flooded a few homes and businesses, and the Colorado River rose above flood stage near Colorado City.

An upper level low pressure system was moving slowly eastward out of Arizona into New Mexico during the early morning of the 8th. Several upper level disturbances were rotating around this feature into west Texas.

Deep tropical moisture remained over the region with precipitable water values well above normal. Thunderstorms developed over west Texas on the morning of the 8th and moved into the western Concho Valley and Big Country before noon. As these storms moved westward, they formed into a slow-moving squall line producing very heavy rainfall over already saturated soils.

By noon, over 4 inches of rain had fallen from near Sweetwater toward Abilene in the upper Elm Creek basin upstream from the already full Lake Abilene. Flooding occurred along streets and county roads in and south of Sweetwater and in the city of Abilene. By 1:30 pm, the Abilene State Park was evacuated near Lake Abilene as Elm Creek continued to rise. A few cars were stranded in flooded waters near the town of Buffalo Gap and water began seeping into houses by 3 pm. By 6 pm, water began flowing over the uncontrolled spillway of Lake Abilene into the already flooded Elm Creek. By the evening of the 8th, the inflow into Lake Abilene was at its peak and water was spilling over the spillway to a depth of just over half a foot. This was just .2 feet below the level of 1995 which caused extensive flooding in the city of Abilene. The crest moved down Elm Creek during the night, continuing to flood a few homes in Buffalo Gap. The crest approached Abilene on the morning of the 9th. Two cars became stranded in the water just south of town, but the passengers were able to escape safely. As the water moved through Abilene, it flooded some streets and parking lots, but was just shy of flooding some businesses. The water entered Lake Fort Phantom Hill on the north side of town and added over a foot of water to the lake. Several roads remained closed through Taylor County through the 9th until the water receded.

Flooding also occurred over Sterling, Mitchell and Fisher counties. The Colorado River at Colorado City rose above flood stage during the night of the 8th and crested just over 14 feet on June 10th (flood stage 8 feet). Lake Sweetwater and Oak Creek Reservoir were filled with the runoff from the heavy rainfall, and Lake Sweetwater had water flowing 2 feet over the spillway on the 9th. Many people were unable to reach their homes around the lake due to flooded roads. Oak Creek Lake had half a foot of water over the spillway. For the June 8th through 9th period, the San Angelo doppler radar estimated widespread 3 inch rainfall over much of Nolan and Taylor Counties with higher 5 to 6 inch areas. Rainfall reports received included 3.55 inches in Nolan, 1.85 inches in Burkett, 4.3 inches in Robert Lee, 6.3 inches 3 miles southwest of Sweetwater, 4.0 inches at Oak Creek Lake and 4.71 inches at Lake Abilene. A total of 15 flash flood and flood warnings were issued with Taylor County under continuous warnings from 11 am on the 8th to 1:30 pm on the 9th.

The last major flood event in June occurred over the Colorado, San Saba, Pecan Bayou and Llano River basins on June 22nd through the 23rd. This was a very damaging flood. Numerous roads and houses were damaged, especially along the Llano River in Kimble and Mason counties. A new record flood occurred at the Llano River near Mason. One person was killed in Brown County while attempting to cross a flooded road.

An upper level low pressure system was stationary over central Texas and parts of the Hill Country through Saturday the 21st. During the evening on Saturday, this upper low moved slowly northward into the Northwest Hill Country near Junction and stayed nearly stationary through Sunday. This upper low brought cool temperatures in the mid levels of the atmosphere which combined with warm and very moist air at the surface to create a very unstable environment. Numerous outflow boundaries from weekend storms over central Texas moved into the Northwest Hill Country and provided the focus for thunderstorm development. Weak winds aloft and a continuous inflow of moisture from the Gulf of Mexico resulted in nearly stationary storms over Kimble and Mason counties through Sunday as the upper low remained over that area. Spiral rain bands around the low repeatedly moved over the same areas, bringing continuous flooding rains. The upper low began to slowly track northward Sunday night, bringing the very heavy flooding rains to much of the eastern HSA. The area hardest hit was over eastern Kimble and Mason counties where as much as 18 inches of rain fell. A total of 28 flash flood warnings were issued during this event. Kimble County was under flash flood and flood warnings from around 2 pm Saturday until 7 am Monday. Several river flood warnings were issued along the Llano River, Colorado River, San Saba River and Elm Creek.

The flooding began in the Junction area during the afternoon of the 21st. Several county roads were flooded and closed by the early evening. The Llano River at Mason rose above bankfull stage of 6 feet around midnight on the 22nd. The rain continued through the night across Mason and Kimble Counties with numerous roads closed by morning. By 3 pm on the 22nd, Segovia in eastern Kimble County had received 9.64 inches of rain. The South Llano State Park had a 16 foot rise on the South Llano River in the park, flooding the bridge at the entrance to the state park, and closing the park. Between 3 and 5 pm, the Llano River near Junction rose 12 feet very rapidly. The Llano River crested near Junction at 23.2 feet at 9 pm on the 22nd. Flood stage is 16 feet. No major damage occurred in the city of Junction, although some people were evacuated from mobile homes close to the river as it rapidly rose. The worst flooding occurred to the

east of Junction along the Johnson Fork of the Llano River and the Llano River across Mason County. One mobile home along the Johnson fork was swept away without a trace. The resident was not in the home at the time. One house was also flooded in eastern Kimble County. The sheriff's office reported that nearly every low water crossing was damaged, with several million dollars of repairs needed. The bridge over the Junction golf course was also washed away.

In Mason County, the situation was much worse. The flood wave raced rapidly eastward across Mason County Sunday night. The Llano River near Mason crested at 37.2 feet around 11 pm. Bankfull stage is 6 feet. This crest was a new record flood since the gage was put in. The previous record was 37 feet on September 8, 1980. The Red Cross reported that one house along the river was completely destroyed. Two houses sustained major damage and 14 houses had minor damage. Agricultural damage was widespread across the county with numerous cattle drowned. Roads were also heavily damaged, including Highway 71. Luckily, no injuries or deaths occurred along the Llano River. Doppler radar estimated an 18 inch maximum precipitation area across eastern Kimble into southwest Mason County.

The flooding did not end across the Hill Country. The upper low began to track slowly northward overnight on the 22nd into the early morning of the 23rd. The heavy rainfall moved into the Heartland across McCulloch, San Saba, Brown and Coleman Counties. Numerous roads were flooded in these areas. Four people had to be rescued from their homes in San Saba as the water rose. The San Saba River at San Saba crested near 29.3 feet around 9 am on the 23rd. Flood stage is 24 feet. The Colorado River near San Saba also rose above flood stage, cresting near 34.2 feet during the evening of the 23rd. Flood stage is 30 feet.

In Brown County, one person was killed while trying to cross a flooded low water crossing. The driver and passenger were in a Suburban and attempted to cross a low water crossing along Hog Creek. The suburban was swept off the road and the vehicle was submerged in water. The passenger was able to escape and call for help. The driver and suburban were not found until Monday evening, one mile downstream from the crossing. Heavy rains across Coleman County produced runoff into the Pecan Bayou. Lake Brownwood quickly filled, with water dumping 4.7 feet over the spillway on the 24th. The lake was closed to all recreation. The city of Brownwood was spared from major flooding. A couple roads and the city park were closed near the bayou, and Willis Creek on the southwest side of town threatened the waste water treatment plant, but did not flood it. If the lake had risen one more foot, flooding would have occurred in the city along the Pecan Bayou. In McCulloch County, two homes were flooded in Mercury from the heavy rains. In Coleman County, the water in Lake Coleman rose to the top of a retaining wall. 20 people were evacuated around the lake. The Pecan Bayou near Mullin in Mills County rose above bankfull of 20 feet and crested at 26.7 feet on the early afternoon of the 26th.

Ballinger in Runnels County was the last area to see flooding with this system. Over 6 inches of rain fell in just a few hours around the city, causing the Elm Creek and Colorado River to rise above flood stage. The city park had to be evacuated quickly. The Elm Creek in Ballinger crested at around 9.1 feet in the early afternoon of the 23rd (flood stage 7 feet). The city park and golf course were flooded. The Colorado River near Ballinger crested around 24.7 feet on the early afternoon of the 23rd (flood stage 18 feet). A fish farm near the river was flooded and a few homes received minor flood damage. Highway 71 south of Ballinger was damaged. The water emptied into O. H. Ivie Reservoir on the 24th, causing the lake to rise over a foot above conservation level. A release of around 7000 cfs was made on the 24th.

The heavy rains continued to move northward into the Eastern Big Country. Elm Creek near Abilene rose to near bankfull. The water drained into Lake Fort Phantom Hill, which filled up with one foot of water over the spillway. A couple of roads were closed around the lake, but no houses were flooded.

Cooperative observer rainfall reports received from this event include:

Mason	10.55	Segovia (up to 3 pm 21 st)	9.64
Ballinger 4 SW	6.31	Lake Coleman	5.00
Winchell	5.30	Brady	5.35
San Saba	6.33	Pontotoc	7.37
Hords Creek Lk.	6.10	Silver Valley	5.54
Taylor Ranch	8.76	Junction	5.06
Telegraph	4.22	Ballinger 2NW	6.78

Very high monthly rainfall totals were observed across the eastern HSA. The western and southwestern areas only received an average of 2 to 3 inches of rain in June. Some areas in the east received over 10 inches of rain. Abilene received 6.86 inches of rain this month, 4.0 inches above normal. Abilene is now 4.62 inches above normal for the year, with 15.9 inches of rain. San Angelo only received 2.57 inches of rain in June, but this is still 0.24 inches above normal. The yearly total is now 15.36 inches, or 5.58 inches above normal.

Some areas across the HSA have had much higher rainfall totals for the first half of 1997, compared to the drought of early 1996. Mason has received over 4 times the January through June 1996 total.

Location	June 1997	Jan - June 1997	Jan - June 1996
Mason	14.11	31.65	7.06
Taylor Ranch	12.67	35.29	10.94
San Saba	11.45	31.60	11.59
Anson	6.66	18.73	6.42
Lake Abilene	11.37	22.66	10.52
Coleman	10.71	24.30	10.84
Ballinger 2NW	9.65	20.91	11.03
Sonora	2.68	13.90	3.95
Sterling City 8NE	5.46	14.37	4.82
Colorado City	6.85	16.78	6.46

Area reservoirs benefitted from the rainfall in June, with several completely filling up, including Lake Sweetwater, Lake Coleman, Lake Brownwood, Lake Abilene, Lake Fort Phantom Hill, and Oak Creek Lake. Reservoir levels at the start of July include:

Lake J.B. Thomas	2219.60	normal - 2258.0
Champion Creek	2070.01	spillway - 2083.0
Oak Creek	2000.70	spillway - 2000.0
Lake Coleman	1718.80	normal - 1717.5
Lake Brownwood	1426.50	spillway - 1425.1
Brady Creek	1738.60	spillway - 1743.0
O.C. Fisher	1878.29	cons. - 1908.0
O.H. Ivie	1552.14	cons. - 1551.5
E.V. Spence	1862.04	cons. - 1898.0
Twin Buttes	1919.81	cons. - 1940.0
Lk. Colorado City	2062.79	cons. - 2070.0